MALHEUR NATIONAL FOREST

COMMERCIAL ROAD USE RULES
And
Road Use Permit Requirements

June 2009

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INTRODUCTION

The Malheur National Forest has jurisdiction and maintenance responsibilities for more than 9,500 miles of roads. But none of those roads that have been constructed to a standard that can handle commercial traffic under **all** weather conditions without sustaining roadway or roadway structure damage. Therefore the Forest has established a Commercial Use Period (see definition on page 5) to designate the times or season when most Forest roads can typically support Commercial Haul activities without sustaining damage. The purposes of the Malheur National Forest Commercial Road Rules are to:

1. To provide direction for the uniform administration of roads under the jurisdiction of the Malheur National Forest in order to provide for user safety, prevent resource damage, and prevent road damage (protect road investments).

2. To inform commercial users, other contiguous road management agencies and adjacent National Forests about requirements concerning use of Malheur National Forest roads.

3. To provide commercial users with an understandable, responsive and uniform explanation of requirements for road use prior to bidding on contracts or applying for special road use permits or authorizations.

4. To implement a responsive system for issuing permits or other arrangements for authorizing road use to meet the special needs unique to specific commercial users.

The road rules are organized displaying (a) the general rules for the Forest, and then (b) specific rules, followed by Appendix A (FS 7700-40, Application for Permit), and Appendix B (Special Information Related to Permit Application Processing Time).

Questions concerning other routes should be directed to the District Ranger. The road rules will be reviewed and revised as necessary. Your cooperation in helping us manage the road system is appreciated.

DEFINITIONS

1. Road Rule - A statement defining traffic conduct required by commercial users (or their agents) on roads under Forest Service jurisdiction. Rules consist of General Road Rules and Specific Road Rules.

2. General Road Rules - Rules applicable to all commercial users of Forest Service roads. The rule applies to all roads unless modified by written waiver (permit, contract, easement, etc.) or by a Specific Road Rule.

3. Specific Road Rules - Rules that modify the General Road Rules and will apply only to selected roads and structures.

4. Commercial Use - Any traffic generated by a commercial user of roads under Forest Service jurisdiction, including but not limited to hauling of hay, livestock, wood products, rock, asphalt, passengers, equipment, or other commercial use.

5. CFR's - The Code of Federal Regulations are developed by Congress, providing rules that Federal Management Agencies must follow. CFR regulations specific to the Forest Service are located in 36 CFR Chapter II.

6. Waiver - A permit, contract, easement, fire order, formal letter, etc., signed by an authorized Forest Officer or Representative, granting approval to modify a General or Specific Road Rule {36 CFR 261.1(a)}. An application for a waiver must be made when a commercial user is unable to comply with a road rule.

7. Roadway - The portion of the road within the limits of excavation and embankment (top of cut to toe of fill) consisting of cut and fill slopes, drainage ditches, and the roadbed, including surfacing and all widened areas.

8. Roadbed – The graded portion of a road between the intersection of the subgrade and the side slope – excluding the portion of the ditch below the subgrade.

9. Subgrade – For roads without imported base or surface aggregate layers, the portion of the roadbed prepared as the finished wearing surface. For roads with base or surface aggregate layers, the layer of native materials that the pavement structures are placed upon.

10. Aggregates – Layers of imported materials, generally rock, that are placed on top of a subgrade to improve the structural strength or support values of the road. On a gravel surfaced road the top layer provides the running surface, and is typically called a surfacing aggregate, If there is more than one layer of aggregate on a road, the layers beneath the top layer are called base aggregates. Asphalt surfaced roads virtually always have one or more layers of base aggregate placed on or above the subgrade materials prior to placement of the asphalt surfacing.

11. Structures - Constructed or installed sections and materials to provide user safety, increase strength, or control drainage on, within, or through the roadway.

12. Pavement Structure – the combination of aggregate layers, other materials, and surfacing materials placed on a subgrade to support and distribute the traffic load to the roadbed.

13. Traveled Way – The portion of the roadway designated for movement of vehicles, including curve widening, but excluding road shoulders and turnouts or auxiliary lanes.

14. MUTCD – Manual on Uniform Traffic Control Devices, which provides direction for uniformity of traffic sign use, including size, color, and placement.

15. Open Roads - Roads where permits may be granted for commercial haul.

16. Prohibited Use Roads – Roads where no use will be authorized.

17. Restricted Use Roads – Roads where certain types of commercial use may not be permitted or use may be permitted with limitations or restrictions.

18. Road Distress - Visible road conditions that occur as a result of road use, or a combination of road use and weather, which indicate that damage to a road or the adjacent resources may occur

unless needed maintenance work is done, the method of operations are changed, or operations are suspended. Examples of indicators include, but are not limited to, excessive dust, compromised or improper functioning road drainage, muddy ditch water, mud tracked onto asphalt or aggregate surfaced roads, and significant distortions of the road surface such as tracks, ruts, potholes, wash boarding, asphalt cracking or settling.

19. Resource Damage - The unplanned alteration of the natural forest environment that may result in a violation of water quality standards, degradation of fisheries values, violation of cultural resource standards, degradation of vegetation values (trees, grasses, shrubs, etc.), degradation of visual standards, or degradation of prior resource related roadway investments. Examples of resource damage include:

A. Scarring or defacing trees, disturbing cultural sites, and damaging meadows or streams along roads.

B. Rutting of native surfaced roads from traffic, which may result in increased erosion and the need for, increased road maintenance work.

C. Operating equipment on vegetated cut and fill slopes, which may destroy vegetation resulting, in increased potential for erosion, sedimentation, or degradation of visual standards.

D. Altering drainage patterns on roadway or roadsides causing water to be concentrated in off sight areas where there is potential for erosion, sedimentation, or other environmental degradation.

E. Placing ditch slough or slide material in areas where such placement may result in increased potential for erosion, sedimentation, and/or damage vegetation.

20. Roadway and Structure Damage - The unplanned reduction in: a) functional road drainage, b) the ability of the road or road structures to support traffic, c) the ability of the road to provide for user safety. Examples of roadway and structure damage include:

A. Marring surfaces of bridges or cattleguards with vehicles or equipment having metal lugs.

B. Any bending or breaking of bridge rails, cattleguard wings, guardrails, culverts, signs, or other structures.

C. Operations that result in a change in the support value or safety of a roadway:

(1) Incorporating soil, mud, debris, or oversized rocks into or onto the roadway, which will affect drainage, normal maintenance activities, or the strength of the road pavement structure.

(2) Intermixing of slash or subgrade soil with aggregate or the mixing between layers of aggregate to occur which will affect the character or strength of the road pavement structure.

(3) Development of potholes or washboard surfaces which could result in saturation of the subgrade, mixing of aggregate layers, or intermixing of subgrade soil with aggregate which will affect the character or strength of the road pavement structure.

(4) Alteration of road drainage that could result in the unacceptable loss of surface rock, a change in character of ditches or drain dips, and/or other concentrations of water that will erode slopes or saturate the subgrade.

(5) Any use on asphalt surfaces that will likely cause contamination of the base aggregates, pothole formation, or breakdown of the asphalt pavement.

(6) Any use of equipment with metal lugs on asphalt paved or crushed aggregate surfaces which could result in segregation, mixing of aggregate layers, breakdown of aggregate or asphalt materials, or a reduction in compaction.

(7) Plowing of aggregate off the roadbed during routine blading or snow removal operations.

(8) Undercutting the cutslope during blading or ditch cleaning operations, which could affect the stability of the slope.

(9) Disposing of ditch slough or slide materials over fill slopes or into culvert inlets areas during maintenance operations, which could affect the stability of the slopes, increase erosion, or degrade vegetation.

21. Recreational Use Period – The time period of each year when a specific road is open for recreation use. This period is normally June 1 to November 30 of each year. Some exceptions include roads where recreation use is yearlong. The recreation use period applies only to roads under the jurisdiction of the Malheur National Forest that are open for passenger car use as documented in the current road management objectives.

22. Commercial Use Period – The normal season or time period of each year when commercial haul on forest roads is allowed through permits, contracts, or other authorizations. The Commercial Use Period for the Malheur National Forest begins on June 1 and ends on January 15. Permits or contracts issued or awarded after the effective date of these Commercial Road Use Rules will prohibit commercial haul outside of the Commercial Use Period, unless otherwise authorized in writing by the Forest Engineer.

GENERAL ROAD RULES

1. Commercial use by any operator of any vehicle having a rated or licensed GVW of 10,000 pounds or more is not permitted on any Malheur National Forest road without a permit or other written authorization per Federal Regulation 36 CFR Part 261.54(c). Requests for application for a commercial road use permit shall be made to the applicable District Ranger (see **Exhibit 6**).

2. Enforcement of rules on roads under the jurisdiction of the Malheur National Forest is subject to the rights granted in existing contracts, permits, and easements in force {36 CFR 261.10 (a)}.

3. Provisions of applicable Oregon State Statutes relating to the operation of motor vehicles, apply to all National Forest System Roads on the Malheur National Forest, and are enforceable by Federal, State, and County law enforcement officers.

4. The load weight, height, length, and width limitations of vehicles on roads shall be in accordance with applicable State Statutes of Oregon. This rule is also enforceable under Federal Regulation 36 CFR 261.12(a). Waivers to overloads, height, length, width, and snow plowing may be allowed when such permission is authorized by contract or in writing. Permission may be granted and documented using the proper format established in contracts or road use permits. Operations not administered by contracts or road use permits will use FS 7700-40 (see Appendix A) and apply for authorization through District Ranger.

Application for overload or variance permits for roads must be made through the District Ranger at least five (5) days in advance of need and approved by the Forest Engineer; and at least twenty (20) days in advance of need for non-standard loads that would cross bridges and other structures (see **Exhibit 5**).

5. Operating a vehicle on roads under the jurisdiction of the Malheur National Forest carelessly, recklessly, or without regard for the rights or safety of other persons or in a manner or at a speed that would endanger or be likely to endanger any person or property is prohibited {36 CFR 261.54 (f)}.

6. Commercial users will obey restrictions listed in the Malheur National Forest Access and Travel Management Plan, unless authorized otherwise by permit, contract, or waiver.

7. Compliance with applicable sections of the Endangered Species Act and the Clean Water Act are required at all times.

8. Invasive Plants – All actions conducted or authorized by written permit by the Forest Service require the cleaning of all heavy equipment (bulldozers, skidders, graders, backhoes, dump trucks, etc.) prior to entering National Forest System Lands. Any authorized road blading, brushing and ditch cleaning in areas with high concentrations of invasive plants must be done in consultation with District or Forest-level invasive plant specialists, and incorporate invasive plant prevention practices as appropriate. Any authorized road maintenance activity that involves haul and placement of gravel, rock, or fill materials must come from approved sources judged to be weed free by District or Forest weed specialists.

9. Constructing or maintaining a road or structure on land under the jurisdiction of the Malheur National Forest is prohibited unless authorized by a contract, permit, fire order, or other written agreement {36 CFR 261.10 (a)}.

10. Many forest roads under the jurisdiction of the Malheur National Forest have some restrictions to use. For example, some roads are closed year around, some are closed seasonally for resource protection or other purposes (i.e. Cooperative "green dot" closure areas), and others are closed for safety reasons until improvements can be made. All roads where commerical and or public use is allowed or permitted may be subject to traffic restrictions or closures to protect specific resource values. Road closures or restrictions may become necessary at any time as a result of wet or saturated soils or other unusual weather conditions - to provide for user safety, to meet fire restrictions or other fire requirements, or when necessary to permit reconstruction and maintenance.

11. The Commerical Use Period is a timeframe or period when weather related road damage is not typically expected to occur, but actual field conditions at any given time may necessitate suspending commercial haul to prevent road damage or creating unsafe conditions for other road users. Therefore - contractors, permittees, or their agents are responsible for voluntarily suspending commercial use on roads under the jurisdiction of the Malheur National Forest at any time when continued use will cause damage to the roadway, structures, adjacent resources, or when continued use will result in unsafe conditions for others {36 CFR 261.12 (c)}.

- Indications of road distress described in the definition section of the Malheur Commercial Road Use Rules rules and in **Exhibits 1 through 4** will be used as guidance in determining when to perform maintenance, change method of operations, strengthen road surface to avoid damage, or suspend operations until conditions change. If the Forest Service determines that the commercial user has failed to take the appropriate action, the commercial users operations will be suspended. Such suspensions shall be effective when the commercial user is notified verbally, in writing, or by road closure posted on the road (36 CFR 261.53). Verbal suspensions will be followed by written notification.

- Extended freeze/thaw conditions typically result in a loss of structural strength in road pavements. Loss of structural strength can occur in the subgrade, base course, surfacing, or any combination of structural layers. In order to determine the times when pavement damage is most likely to occur, thermistors have been installed in most asphalt pavements, to measure freeze thaw conditions beneath the pavements. The data gathered from monitoring themistors and deflection testing will be used to help predict or determine when commercial haul activities should be suspended, and to help determine when commercial haul activities might be safely resumed (see Deschutes, Malheur, and Ochoco policy in **Exhibits 7 through 9**).

12. All existing roads under the jurisdiction of the Malheur National Forest authorized for use in a contract, permit, fire order, or other written agreement may require reconstruction or pre-haul maintenance if used for commercial activities. Prior to use, the Forest Service must agree to the necessary reconstruction or pre-haul maintenance, which must be performed by the commercial user for safety, investment protection, structural support, and/or resource protection. Reconstruction or pre-haul maintenance requirements will be guided by the current road management objectives and an on the ground evaluation of the road or roads involved. Required maintenance or reconstruction could include one or more of the following types of work:

- Roadway brushing clearing (including danger tree removal)
- Roadbed widening (including turnouts, shoulders, curves, etc.)
- Surfacing (including asphalt, aggregate, pit run, etc.)
- Slide removal (including loading, haul, placement, compaction, etc.)

- Slump repair
- Drainage installation and correction (culverts, drain dips, ditches, etc.)
- Reconditioning (blading, shaping, scarifying, compacting, etc.)
- Stabilization (planting, seeding, fertilizing, and other erosion control measures).
- Bridge replacement or repair.

Prior to use, all Road Use Permit and Commercial Timber Sale use routes will be inspected by certified Forest Service personnel for danger trees in accordance with the USDA Field Guide for Danger Tree Identification and Response. Imminent danger trees will be marked and removed or felled to mitigate the danger from the travel routes prior to use. The cost of removal or felling may be assigned to the commercial user by either performance or deposits as specified in the contract or permit.

13. Unless authorized by a contract, permit, fire order, or other written agreement under the jurisdiction of the Malheur National Forest, no road may be blocked by placement of any vehicle or other object upon it which is an impediment or hazard to safety, or conflicts with other users {36 CFR 261.10 (f) and .12 (d)}. Examples of impediments or hazards include:

- Slow moving logging, construction, or road maintenance equipment is operated without posting proper warning signs.
- Falling trees onto the roadway without permit and proper warning signs and/or flaggers.
- Slash or debris deposited or left in the roadway (cut slopes, fill slopes, ditches, culvert openings structures, etc).
- Parking equipment or vehicles in the travel way, including turnouts without proper signing.
- Logs yarded or decked on the road travel way, including turnouts.
- Application for permission to block roads or use them as landings or other uses must be made to the District Ranger at least five (5) days in advance of need.

14. Unless authorized by a contract, permit, fire order, or other written agreement vehicles or equipment with metal lugs are prohibited on bridges, cattleguards, or asphalt surfaced roads under the jurisdiction of the Malheur National Forest.

15. Unless authorized by a contract, permit, fire order, or other written agreement vehicles or equipment with metal lugs are prohibited on crushed rock surfaced roads under the jurisdiction of the Malheur National Forest. Verbal approval of planned movements between areas of the same project will be followed by written notification.

16. Unless authorized by a contract, permit, fire order, or other written agreement all gates on roads under the jurisdiction of the Malheur National Forest shall be kept closed except when entering or leaving the vicinity. Gates that are tied or locked open shall be left open {CFR 36 261.7 (c)}.

17. Damaging a road under Forest Service jurisdiction and leaving it in a damaged condition is prohibited. Damage is exclusive of ordinary road maintenance described in contracts or permits and includes, but is not limited to contamination, disturbance, or loss of aggregate or asphalt surfacing which cannot be repaired with typical road maintenance activities. Reference 36 CFR 261.12(c).

18. Snowplowing will not be allowed except by specific provision in each permit, contract provision, or other written agreement. This policy will be enforced, if necessary, through regulations written under 36 CFR 261.10(a).

- For work being done by Forest Service contract, authority to issue permits is specified in the contract. For situations not covered by a contract, District Rangers are authorized to issue snowplowing permits. Snowplowing permits will be issued in accordance with requirements and restrictions specified in the road rules.

- All blades or plows on graders, and any type of dozer, shall be equipped with shoes or runners to keep the blade a minimum of two (2) inches above the road surface unless otherwise agreed in writing.

- On roads requiring dual use (commercial and public use), snow will be plowed from all of the traveled way, including turnouts. On roads authorized for single user plowing only, snow will be removed from all of the traveled way and sufficient turnouts for safe and efficient use by both the road user and Forest Service administration; the user will be required to block the road with snow at various points within the snowplowed area upon completion of use, unless otherwise agreed in writing.

- There are many roads designated as snowmobile routes on National Forest System land. No snowplowing or use by vehicles other than over-snow vehicles will be authorized when the road has been groomed and posted for over-snow vehicles on the ground, unless approved in writing by the Forest Service. This occurs annually, normally between December and May, but some variations can be expected. Contact your local Ranger District for maps, location, and information specific to these routes.

19. Ice control will be permitted when approved in writing. Written approval will include type of ice control materials, application rates, and any specific requirements of use. The permittee or purchaser will supply non-skid materials as required in Oregon by OAR 437-06-095 (2). Any accumulation of excess sanding rock will be removed by the user.

20. Chemical dust abatement materials (excluding water) shall only be used when approved in writing by the Forest Service prior to placement. Approved dust abatement palliatives are listed in the specific provision or specification included with each permit, contract provision, or other written agreement. Approved dust abatement palliatives (other than water) include ligninsulfonates, magnesium chloride, and calcium chloride. Other chemicals may be considered for approval by the Forest Service upon receipt of manufacturer's documentation of chemical composition, recommended application procedures, and Material Safety Data Sheets. The use of used oil as a dust suppressant is prohibited in any concentration (40 CFR 279).

SPECIFIC ROAD RULES

BRIDGES:

ROAD NUMBER	MILEPOINT	RESTRICTION
1300862	0.1	50,000 lbs. GVW Type 3 vehicles 72,000 lbs. GVW Type 3S2 vehicles (Log Trucks) 80,000 lbs GVW Type 3-3 vehicles (unless otherwise authorized in writing)
1601621	0.90	Load Limits for all vehicles not to exceed 32,000 lbs. GVW (unless otherwise authorized in writing.)
2490933	0.10	Closed to all motor vehicle use year-around.
4559000	3.40	Closed to all motor vehicle use year-around.
6200818	0.10	Closed to all motor vehicle use year-around.

ROADS:

ROAD NUMBER	MILEPOINT	RESTRICTION
16	29.0-41.5	Load limits for all vehicles not to exceed 54,000 lbs. GVW (unless otherwise authorized in writing.)

EXHIBIT 1

GRAPHIC REPRESENTATION OF ROAD DISTRESS/ RESOURCE RISK/ SAFETY RISK INDICATORS// DAMAGE/ CONDITION

PIT RUN, OR NATIVE SURFACE // MAINTENANCE LEVEL 2

' ----------ROAD FULLY MEETS MAINTENANCE/RECONSTRUCTION/CONSTRUCTION SPECIFICATIONS"----------'

ROAD OPERATED WITHIN SAFE COST EFFECTIVE RANGE	*DUST*		*TRACKS*		*SURFACE WEARING*		
RANGE DISTRESS/ RESOURCE RISK/SAFETY RISK/SAFETY INDICATORS VISIBLE	DUST CLOUD 5 - 6 FEET HIGH	IMPROPER DRAINAGE/ MUDDY DITCH WATER/MUD ON ROAD	FREEZE/THAW CONDITIONS/ IMPROPER SNOW REMOVAL	TRACKS 3 - 5 INCHES DEEP ON CURVES	POTHOLES AND WASHBOARDING 3 - 5 INCHES DEEP IN TRACKS	SLASH AND/OR ROCKS ON ROAD SURFACE 3-4 INCHES HIGH OR IN DITCHES	
ROAD SURFACE DAMAGE/ RESOURCE DAMAGE/ UNSAFE CONDITION EXISTS	DUST CLOUD > 6 FEET HIGH AFFECTING USER SPEED	VIOLATES WATER QUALITY STANDARDS OR DEGRADES FISHERY VALUES	EROSION RESULTING IN LOSS OF DITCHLINE, TRAVELED WAY, OR SLOPES	RUTS OR BERMS > 5 INCHES DEEP OR MIXING OF AGGREGATE AND SUB-GRADE	SOFT SPOTS RESULTING IN PUMPING OR VISIBLE HORIZONTAL OR VERTICAL DISPLACEMENT	CONTINUOUS POTHOLES OR WASHBOARDING > 5 INCHES DEEP THAT CANNOT BE AVOIDED	SLASH AND/OR ROCKS > 4 INCHES HIGH AFFECTING USER SPEED OR BLOCKING DITCHES, CULVERTS OR DRAINAGES

"ANY ONE OR ALL FOR ANY LENGTH OF ROAD"

INDICATORS IDENTIFY THE NEED TO 1) PERFORM MAINTENANCE WORK, 2) CHANGE METHOD OF OPERATIONS, 3) STRENGTHEN ROAD SURFACE TO AVOID DAMAGE, OR 4) SUSPEND OPERATIONS UNTIL CONDITIONS CHANGE

EXHIBIT 2

GRAPHIC REPRESENTATION OF ROAD DISTRESS/ RESOURCE RISK/ SAFETY RISK INDICATORS// DAMAGE/ CONDITION

CRUSHED AGGREGATE, PIT RUN, OR NATIVE SURFACE // MAINTENANCE LEVEL 3

' ----------ROAD FULLY MEETS MAINTENANCE/RECONSTRUCTION/CONSTRUCTION SPECIFICATIONS"----------'

ROAD OPERATED WITHIN SAFE COST EFFECTIVE RANGE	*DUST*		*TRACKS*		*SURFACE WEARING*		
RANGE DISTRESS/ RESOURCE RISK/SAFETY RISK/SAFETY INDICATORS VISIBLE	DUST CLOUD 4 -5 FEET HIGH	IMPROPER DRAINAGE/ MUDDY DITCH WATER/MUD ON ROAD	FREEZE/THAW CONDITIONS/ IMPROPER SNOW REMOVAL	TRACKS 2-3 INCHES DEEP ON CURVES	POTHOLES AND WASHBOARDING 2-3 INCHES DEEP IN TRACKS	SLASH ON SURFACE > 2 INCHES HIGH OR IN DITCHES	
ROAD SURFACE DAMAGE/ RESOURCE DAMAGE/ UNSAFE CONDITION EXISTS	DUST CLOUD > 5 FEET HIGH AFFECTING USER SPEED	VIOLATES WATER QUALITY STANDARDS OR DEGRADES FISHERY VALUES	EROSION RESULTING IN LOSS OF SURFACE FINES. DITCHLINE OR SLOPES	RUTS OR BERMS > 3 INCHES DEEP OR MIXING BETWEEN LAYERS	SOFT SPOTS RESULTING IN PUMPING OR VISIBLE HORIZONTAL OR VERTICAL DISPLACEMENT	CONTINUOUS POTHOLES OR WASHBOARDING > 3 INCHES DEEP THAT CANNOT BE AVOIDED	INTERMIXING OF AGGREGATE AND SLASH OR AFFECTING THE SUPPORT VALUE OR BLOCKING DRAINAGE

"ANY ONE OR ALL FOR ANY LENGTH OF ROAD"

INDICATORS IDENTIFY THE NEED TO 1) PERFORM MAINTENANCE WORK, 2) CHANGE METHOD OF OPERATIONS, 3) STRENGTHEN ROAD SURFACE TO AVOID DAMAGE, OR 4) SUSPEND OPERATIONS UNTIL CONDITIONS CHANGE

EXHIBIT 3

GRAPHIC REPRESENTATION OF ROAD DISTRESS/ RESOURCE RISK/ SAFETY RISK INDICATORS// DAMAGE/ CONDITION

ASPHALT OR CRUSHED AGGREGATE SURFACE // MAINTENANCE LEVEL 4

' ----------ROAD FULLY MEETS MAINTENANCE/RECONSTRUCTION/CONSTRUCTION SPECIFICATIONS"----------'

ROAD OPERATED WITHIN SAFE COST EFFECTIVE RANGE	*DUST*		*TRACKS*			*SURFACE WEARING*	
RANGE DISTRESS/ RESOURCE RISK/SAFETY RISK/SAFETY INDICATORS VISIBLE	DUST CLOUD 3-4 FEET HIGH	IMPROPER DRAINAGE/ MUDDY DITCH WATER/MUD ON ROAD	FREEZE/THAW CONDITIONS/ IMPROPER SNOW REMOVAL	MINOR ASPHALT ALLIGATOR CRACKING	TRACKS 1-2 INCHES DEEP ON CURVES	POTHOLES AND WASHBOARDING 1-2 INCHES DEEP IN TRACKS	SLASH ON ROAD SURFACE OR IN DITCHES
ROAD SURFACE DAMAGE/ RESOURCE DAMAGE/ UNSAFE CONDITION EXISTS	DUST CLOUD > 4 FEET HIGH AFFECTING USER SPEED	VIOLATES WATER QUALITY STANDARDS OR DEGRADES FISHERY VALUES	EROSION RESULTING IN LOSS OF SURFACE FINES, DITCHLINE OR SLOPES	RUTS OR BERMS > 2 INCHES DEEP OR MIXING BETWEEN LAYERS	SOFT SPOTS RESULTING IN PUMPING OR VISIBLE HORIZONTAL OR VERTICAL DISPLACEMENT	CONTINUOUS POTHOLES OR WASHBOARDING > 2 INCHES DEEP THAT CANNOT BE AVOIDED	INTERMIXING OF AGGREGATE AND SLASH AFFECTING THE SUPPORT VALUE OR BLOCKING DRAINAGE

"ANY ONE OR ALL FOR ANY LENGTH OF ROAD"

ANY ONE OR ALL FOR ANY LENGTH OF ROAD INDICATORS IDENTIFY THE NEED TO 1) PERFORM MAINTENANCE WORK, 2) CHANGE METHOD OF OPERATIONS, 3) STRENGTHEN ROAD SURFACE TO AVOID DAMAGE, OR 4) SUSPEND OPERATIONS UNTIL CONDITIONS CHANGE

EXHIBIT 4

GRAPHIC REPRESENTATION OF ROAD DISTRESS/ RESOURCE RISK/ SAFETY RISK INDICATORS// DAMAGE/ CONDITION

ASPHALT SURFACE // MAINTENANCE LEVEL 5

' ----------ROAD FULLY MEETS MAINTENANCE/RECONSTRUCTION/CONSTRUCTION SPECIFICATIONS"----------'

ROAD OPERATED WITHIN SAFE COST EFFECTIVE RANGE	*TRACKS*		*SURFACE WEARING*			
RANGE DISTRESS/ RESOURCE RISK/SAFETY RISK/SAFETY INDICATORS VISIBLE	IMPROPER DRAINAGE/ MUDDY DITCH WATER/MUD ON ROAD SURFACE	FREEZE/THAW CONDITIONS/ IMPROPER SNOW REMOVAL	MINOR ASPHALT SURFACE CRACKS FORMING	MINOR TRACKS FORMING ON CURVES	POTHOLES 1 -2 INCHES DEEP IN TRACKS	SLASH AND/OR ROCKS ON ROAD SURFACE OR IN DITCHES
ROAD SURFACE DAMAGE/ RESOURCE DAMAGE/ UNSAFE CONDITION EXISTS	VIOLATES WATER QUALITY STANDARDS OR DEGRADES FISHERY VALUES	EROSION RESULTING IN LOSS OF DITCHLINE, SHOULDERS, OR SLOPES	ALLIGATOR CRACKING > 2 INCHES DEEP OR MIXING BETWEEN MATERIAL LAYERS	SOFT SPOTS RESULTING IN PUMPING OR VISIBLE HORIZONTAL OR VERTICAL DISPLACEMENT	POTHOLES > 2 INCHES DEEP IN TRACKS THAT CANNOT BE AVOIDED OR ARE > 5 FEET IN LENGTH	INTERMIXING OF SHOULDER AGGREGATE AND SLASH AFFECTING USER SAFETY OR BLOCKING DRAINAGE

"ANY ONE OR ALL FOR ANY LENGTH OF ROAD"

INDICATORS IDENTIFY THE NEED TO 1) PERFORM MAINTENANCE WORK, 2) CHANGE METHOD OF OPERATIONS, 3) STRENGTHEN ROAD SURFACE TO AVOID DAMAGE, OR 4) SUSPEND OPERATIONS UNTIL CONDITIONS CHANGE

(Exhibit 5)

Special Information Relating to Permit Application Processing Time

The Malheur National Forest has requirements instituted to protect threatened and endangered migratory and non-migratory fish species. These requirements may result in a longer process for issuing National Forest Road Use permits. The requirements for processing Road Use Permits could result in minimal delays or up to two-year delays if substantial changes to ongoing activities occur.

The additional time to process a National Forest Road Use Permit is due to the Federal listing under the Endangered Species Act (ESA) of the Snake River Chinook salmon, Bull Trout, Mid-Columbia and Snake River Steelhead along with critical habitat designated for those four species. The listings cover many streams within lands administered by the Malheur National Forest. Under ESA, there are certain requirements that the Forest Service has to meet prior to authorizing use of a National Forest Road.

Each request for Commercial Road Use will stand on its own. The Forest will endeavor to help move each Permit through the process as quickly as possible. Additional information on this process may be obtained through the Forest Road Manager.

The ESA requires the Forest Service to complete and/or approve a Biological Assessment (BA) on all activities, which take place within any river drainage of a listed species or habitat within the National Forest boundaries. If the BA indicates that the proposed activity may have a risk of detrimental effect on a federally listed species (may effect) then consultation has to take place with the National Marine Fisheries Service (NMFS) and/or Fish and Wildlife Service (FWS) and agreement may be reached on mitigating measures to take on the proposed activity. When a request for the use of a Forest Service road is received, it will have to go through the above process, unless the associated road activity has already been through the process and a determination has been made part of the evaluation of ongoing activities. In this case, the permittee's use may be considered part of the ongoing use.

If there is a proposal for a substantial change such as opening a closed road, building a new road, reconstructing an existing road, etc., then these actions will be assessed. Forest Service biologists will also need to assess the effects of the proposed private land activities based upon the information given to us by the landowner. If our biologist makes a no effect determination for the proposed road related activity, and the determination for the activity on private land is no effect, then the permit may be issued without going through consultation with NMFS or FWS. In all other cases, we (the party requesting the permit and the Forest Service) are required to enter into the consultation process with NMFS and FWS. The outcome of the consultation process will determine under what conditions a permit will be issued.

The authority for issuing any grant of access is subject to the Secretary's regulations at 36 CFR 251.54, subpart B and 251.110. Those regulations provide for granting of special-use authorizations for access purposes, but such authorizations are made subject to the requirements of all other laws, which include the ESA by regulation at 36 CFR 251.56. The time frame involved in this procedure could be as much as two years for an activity that results in "may effect" determination on a federally listed species. (This period is based on the Forest Service doing all of the evaluation. If

the Forest Service is unable to complete the needed BA soon enough to meet the needs of the Road Use Permit applicant, the applicant may contract with a consultant for the completion of a BA to Forest Service standards.

The completed BA would be submitted to the Forest Service for evaluation and final determination of the effect of the proposed activity on federally listed species. Consultation with the NMFS or FWS on a "may effect" or "effect" is to allow NMFS or FWS to prepare a Biological Opinion on the effects of the proposed activities. Three potential "May Effect" outcomes are

1. "Likely to adversely effect" →Biological Opinion
2. "Not to adversely effect" →Letter of Concurrence
3. "Beneficial" effect" →Letter of Concurrence

Permits cannot be issued until the consultation is completed, and any permits that are issued must include provisions that are consistent with the NMFS and/or FWS Biological Opinion. Any provisions in the Biological Opinion that address planned activities on private land are subject to resolution by the landowner and NMFS and/or FWS.

The Forest Service realizes the difficult position which this consultation process may have on you - the private landowner. We will work with you to try to reduce the impacts as much as we can. If you need further clarification on National Forest Road Use Permits and who needs them, contact a Malheur National Forest Road Manager listed below.

541 575-3166 Mike Montgomery, Forest Engineer
541 575-3709 Ben Lindley, Forest Road Manager
541 575-3043 Vicki Lundbom, Assistant Forest Road Manager

USDA Forest Service
FS-7700-40 (8/95)

APPLICATION FOR PERMIT
NON-FEDERAL COMMERCIAL USE OF ROADS RESTRICTED BY ORDER
(Reference to FSM 7730)

NOTE: This report is authorized by Acts of June 10, 1914; April 24, 1950; June 12, 1960, and October 13, 1964 (USC 478,572,530 and 532-38). No permit may be issued unless a completed Form 7700-40 is received.

For Official Use Only					DATE OF APPLICATION
REGION	STATE	COUNTY	FOREST	RANGER DISTRICT	

1. APPLICANT (Name, address, and Zip Code)

_____
_____
_____

TELEPHONE NUMBER
( ) -

2. DESCRIPTION AND MILEAGE OF ROAD(S) OR ROAD SEGMENT(S) TO BE USED (as shown on attached map)

3. PURPOSE OF USE

HAULING LOGS OR LUMBER _____ MBF
(Quantity)

HAULING OTHER MATERIALS _____ TONS
(Quantity)

DESCRIBE MATERIALS _____

4. USE SCHEDULE

SEASON	NUMBER OF DAYS OF USE	TYPE OF TRUCKS TO BE USED	TYPE OF LOADING TO BE USED
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

5. PLANS FOR FUTURE USE (Not applied for on this application)

HAULING LOGS OR LUMBER _____ MBF
(Estimated Quantity)

HAULING OTHER MATERIALS _____ TONS
(Estimated Quantity)

DESCRIBE MATERIALS _____

ESTIMATED PERIOD OF USE FROM _____ TO _____

SIGNATURE OF APPLICANT	DATE

(Exhibit 7)

POLICY FOR MANAGING LOG HAUL ON PAVED ROADS

UNDER FREEZE/THAW CONDITIONS

FOR

DESCHUTES, MALHEUR, AND *OCHOCO*

NATIONAL FORESTS

(Exhibit 7)

March 13, 1991

Reply to: 7730

Memo on File at Supervisors Office

Subject: Tri-Forest Policy

To: Forest Engineers & District Rangers Deschutes N.F., Malheur N.F., Ochoco N.F.

Please implement the enclosed guidelines set forth under the "Policy for Managing Log Haul on Paved Roads Under Freeze/Thaw Conditions" for the Deschutes, Malheur, and Ochoco National Forests.

/s/Thomas A. Schmidt	/s/Mark Boche	/s/Jose Cruz
THOMAS A. SCHMIDT	MARK BOCHE	JOSE CRUZ
Ochoco Forest Supervisor	Malheur Forest Supervisor	Deschutes Forest Supervisor

(Exhibit 7)

Memo on file at Supervisors Office

POLICY FOR MANAGING LOG HAUL ON PAVED ROADS UNDER FREEZE/THAW CONDITIONS FOR DESCHUTES, MALHEUR, AND OCHOCO NATIONAL FORESTS

March *5*, 1991

Prepared by:

Kelsey DeJean, Team Leader
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Ochoco NF

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Purchaser Representative
Snow Mountain Pine Ltd

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Timber Management
Contracting Officer
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Engineering Geologist
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Malheur NF

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Region 6

Greer Kelly
Purchaser Representative
DAW Forest Products

Bob Slimp
Timber Sale Officer
Malheur NF

Glenda Wilson
Forest Engineer
Ochoco NF

Jerry Arsena
Asst District Ranger-Operations
Ochoco NF

Additional input was contributed by:

Tom Moore
Assistant Forest Engineer
Ochoco NF

Jim Powell
Lead Timber Sale Officer
Ochoco NF

(Exhibit 7)

PURPOSE

Forest Service and Industry will cooperate to provide uniform and consistent guidelines to optimize log haul during freeze/thaw conditions on paved roads while protecting resource and road structure investments.

CURRENT SITUATION AND PROBLEM DEFINITION

Studies by numerous public agencies have conclusively shown that thawing of frozen bases and subgrades seriously weakens their ability to provide support for pavements. If hauling continues during this time, subsequent pavement damage can be up to 350 times as severe as that during normal use.

Freeze/thaw weakening occurs in all road materials that are not free draining, which includes almost all of our subgrade soils and most of our base materials (especially old "used" base materials). Thawing generally occurs faster on the running surface of roads. This traps the thawed water between the frozen shoulders causing a "bathtub" effect. The subgrade and base strength returns when the water has had a chance to drain away.

Several eastside Oregon Forests (Ochoco, Umatilla, Deschutes, and Fremont National Forests) are using thermistors to determine when road subgrade thaw weakening occurs and subsequently to shut off log haul on their paved roads. The Fremont N.F., however, is using deflection testing, measured with a Benkleman Beam, to determine strength recovery and subsequently when log haul can resume.

Due to a lack of consistent approach, some confusion has developed between Forest Service officials (sale administrators and engineers) as well as Industry as to when, and if, road damage is actually occurring. One concern is that thermistors alone only monitor temperature and not the presence of moisture, which makes the thawing condition most detrimental. Another is very short notices of shutdowns for operators causing problems with their operations. Therefore, we need to develop a simple, yet dependable, method that will enable us to determine and communicate if the potential for excessive road damage is present. This policy should also provide a means to refine current technology, including correlation of deflection, temperature and moisture content.

Identifying initial thaw is straight forward, but identifying strength recovery is not as clear. A variety of methods and tools are used to predict initial thaw and strength recovery. They are discussed in the next section.

TEMPERATURE

Thermistor strings have been successfully utilized since 1984 in Montana and have been used on these three Forests since 1986. They have been thoroughly tested in the lab for their dependability to predict temperatures accurately in different conditions and materials. This same lab testing has shown that thawing occurs at 31.70 degrees F.

MOISTURE

A moisture probe can be used to give an approximate indication of amount of moisture in the subgrade or base material. Another method of detecting excess moisture is to drive a spike in the pavement structure and visually observe the presence of free moisture. Soil moisture cells can also be used but they have some limitations; i.e., they work only in fine grained cohesive soils, must be calibrated to get actual readings, and have a tendency to be short lived. Other methods, such as soil tension (suction), may be used in the future to measure the effects of the presence of moisture, but the current technology is not complete at this time.

DEFLECTION

There are several methods for determining pavement deflections. The Benkleman Beam is used in conjunction with an 18 kip axle load to measure deflection at a given point. Temperature of the pavement must be measured for a correction back to 70 degrees F. This is a reasonably simple and accurate process for determining deflections. Other methods are available but require expensive equipment which is not normally available.

RECOMMENDATIONS

1. Pavements shall, be protected from damage due to freeze/thaw conditions but need to be available for use when damage is not expected to occur.

- The pavements that are referred to are those asphalt surfaced roads for which the road management objectives (RMO's) stipulate an asphalt pavement. There will be little risk taken on these roads with regard to damage.

- Roads which are currently asphalt surfaced for dust abatement and surface stabilization where the primary intent of the RMO's is an aggregate surface will be protected also, but more risk may be taken.

- This policy should be implemented through the Forest Roads Rules document.

- Alternative methods to optimize haul will be considered such as: load restrictions, loaded trucks in outside lane, etc.

2. Industry and the Forest Service will work together to optimize haul and operations time.

- Both parties should maintain good communications about site conditions.

- Thermistors will be used to more accurately predict the thaw period.

- The Forest Service will attempt to provide a warning of impending thaw conditions 3 to 4 days before possible shutdown and notify purchasers 48 hours before operational shutdown (see Exhibit 1). Purchasers Representatives will be encouraged to take thermistor readings to aid in monitoring and predictions.

- Deflection measurement by Benklemen Beam or equivalent method normally will be used to determine strength recovery so haul can resume. Purchasers are encouraged to provide assistance in taking deflection tests.

- Forest Service and Industry should provide training to all parties involved.

A joint meeting will be scheduled annually to critique past efforts and identify necessary improvements.

3. Thermistors should be installed on all pavements where freeze/thaw protection necessary.

- Install thermistors to cover the temperature extremes; i.e., locate coldest and warmest locations. If there is a substantial difference in elevations, distance between the extremes, or change in aspect then install a thermistor at a reasonable midpoint. It may be good to install one near major intersections or at the junction of different pavement tructures.

- Location of thermistors should be marked and an identification number assigned to each site. A consistent method should be used between Forests. Share the locations with involved District and Industry people.

4. Thermistors will be monitored as directed by Exhibit 1 (see attached).

- Monitoring can be done by anyone with a thermistor reader. Results will be recorded on a data form (see attached Exhibit 2) and submitted to the Forest Road Manager.

- When temperatures are above 31.7 degrees F and if questions arise in interpreting readings, contact the Forest Geotechnical Engineer.

5. Deflection testing should be complete on all pavements to determine normal deflections as reference.

- Strength recovery following thawing will be considered adequate when the total deflection is 0.055 inches or less using temperature corrected value.

- If the baseline data under normal conditions exceeds 0.050 inches the road use will be reviewed on a case by case basis.

- Deflection testing frequency will follow Exhibit 1. A minimum of 3 readings per site spaced 100 feet apart should be taken. Use the numerical average of the 3 readings to determine the deflection value.

6. There will be a continued effort to gather data to refine and simplify this Tri-Forest Policy.

- The goal is to correlate moisture content, temperature and deflection data to eventually find the most cost effective method.

- Temperature data will be collected each time deflections are taken. If moisture measuring capabilities are available, moisture readings should also be taken and recorded.

- It is recommended that each Forest have their own Benkleman Beam and an 18 kip axle configuration to provide timely deflection testing.

- When additional deflection data is available, the acceptable reference deflections for strength recovery will be validated.

- The Forests need to develop technology to correlate moisture conditions to road damage.

(Exhibit 8)

Summary of Monitoring Activities

For Paved Roads Under Freeze/Thaw Condition

GROUND CONDITIONS

	NORMAL	FROZEN	INITIAL THAW 1/	CRITICAL THAW 2/	POST THAW 3/
Activity	Deflection testing for data base information	Temperature readings	Temperature readings and/or visual observations	Temperature readings. Moisture readings if available	Temperature readings. Moisture readings if available. Deflection testing
Frequency of Activity	As Necessary	On active haul routes once every two weeks; as convenient on other routes	2 to 3 times a week on active haul routes; as convenient on other routes	Daily on active routes; as convenient on other routes	Once a week unless more often is needed on haul routes; as convenient on other routes
*Responsi-bility	Forest Service	Forest Service	Forest Service	Forest Service	Forest Service
Communi-cations	----	----	Provide warning 3 to 4 days before possible shut down 4/ 5/	Notify Purchaser Rep when shutdown may occur in 48 hours 4/ 5/	Notify Purchaser Rep when startup is approved 6/

1/ When melting conditions appear on road surface.

2/ When the top two thermistors are equal to or above 30° Fahrenheit

3/ When deflections are decreasing and reflect strength recovery.

4/ These warning times may not be possible under extreme weather conditions, therefore Purchasers and Operators must keep close attention to thawing weather conditions and plan to halt operations accordingly. Allowance to remove logging equipment can be agreed to if vehicle axle loadings are kept to standard legal limits and pavement damage will be repaired at Purchaser expense.

5/ SHUTDOWN: Haul will be suspended when thawing occurs in the base or when it occurs at the top of the subgrade, if there is a free-draining base.

6/ STARTUP: Haul may resume when strength has adequately recovered or when deflections measure 0.055 inch or less by the Benkleman Beam or equivalent method.

*NOTE: Purchasers are encouraged to participate in all aspects of monitoring.